

Exhibit E

EXHIBIT 4

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

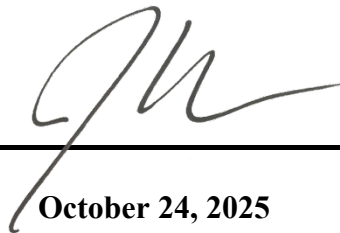
IN RE UBER TECHNOLOGIES, INC., PASSENGER SEXUAL ASSAULT LITIGATION

Case No. 3:23-md-03084-CRB

REBUTTAL REPORT OF JOHN CHANDLER, Ph.D.

This Report relates to the following Wave 1 Cases:

**Case No. 24-cv-7940 (B.L.)
Case No. 24-cv-7821 (A.R.2)
Case No. 24-cv-7019 (LCHB128)
Case No. 23-cv-6708 (Dean)
Case No. 24-cv-4900 (WHB 832)**



October 24, 2025

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I. Background, Qualifications, and Experience

1. I am an Assistant Professor of Data Science at the University of St. Thomas and received a Ph.D. in Statistics from the University of Montana in 2010. I have worked professionally in data science since 1999, before the term was coined. I was a Clinical Professor of Marketing at the University of Montana for 10 years, teaching marketing classes and have been a practitioner of marketing for twenty-five years.

2. I submitted an opening report (“Opening Report”) in this matter on September 26, 2025. My background, qualifications, and experience are described in paragraphs 1 through 16 of my Opening Report.

II. Assignment

3. I have been asked to draw on my industry background and academic expertise to assess the reasoning and analysis of Uber’s expert witness, Dr. Victoria Stodden, in her expert report (“Stodden Report” or “Report”). I have been asked to examine the Report’s methodology and conclusions from both an industry and a scientific perspective.

4. I have been asked to respond to the opinions of one of Uber’s experts. I have not evaluated every opinion offered in the Stodden Report nor other expert reports; claims that are not addressed directly do not imply that I concur with those opinions. My opinions are based on my expertise, experience, training, and research. My work on this matter is ongoing, and I reserve the right to update my opinions as more information becomes available.

5. A list containing additional materials relied upon, including those considered my Opening Report, is included in Appendix A.

III. Summary of Opinions

6. The Stodden Report makes numerous grave, fatal, and surprising errors. The Report is riddled with methodological and analytical issues. I have grouped the errors into three categories for clarity.

7. Erroneous Conclusions Driven by Failure to Use Generally Accepted Statistical Principles and Methods: The Stodden Report departs from the well-established paths of 100 years of statistical practice and reaches erroneous, misleading conclusions. The Stodden Report is, in Dr. Stodden’s words, merely descriptive statistics.¹ But the Stodden Report attempts to draw inferential

¹ Oct. 21, 2025 Deposition Dep. of Victoria Stodden at 258:04-06 (Oct. 21, 2025) (“So the statistical reporting in Table 1 and Table 2 is fairly straightforward in the sense that we’re taking these reported rates and just looking at how they’re related. I don’t think — there is maybe descriptive

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conclusions without applying the necessary, basic statistic principles to do so. Rather than hewing to standard practices in statistics, the Report buries assumptions, shuns inferential methods, and arrives at hyperbolic conclusions. Had the Stodden Report followed statistical convention, its conclusions would have been vastly different. The Report would have had to acknowledge that Uber rides are statistically riskier than Uber has disclosed to the public and as represented in the Stodden Report. This is particularly true for women under conditions known to Uber: pickups late at night, near a bar, when the rider is alone, and has been drinking.

8. **Lack of Fit to the Facts of this Matter:** The Stodden Report omits necessary context that is essential to extend her conclusions to the factual circumstances of these Plaintiffs. Even if I ignore the methodological flaws, the comparisons made in the Stodden Report are invalid for this matter. The Stodden Report is, essentially, 46 numerical comparisons, 41 of which compare quantities that are entirely incommensurate.² I would describe this as an “apples to oranges” category of error if the size of an orange was “*118,400 times higher*” than the size of an apple. This is statistical equivalent of comparing apples to an entire produce section. Further, for a report that, substantively, is merely comparing sets of numbers, sets of relevant numbers that refute Dr. Stodden’s opinions are ignored entirely: a survey done by Uber that is directly comparable to the transit surveys, many years of Uber sexual assault and sexual misconduct (“SA/SM”) data, and data from the National Crime Victimization Survey (“NCVS”).

9. **Grossly Misleading Presentation of “Results:”** The Stodden Report departs from standard, professional practices of data driven communication, misleading and the fact finders with unqualified, over-the-top conclusions. The Stodden Report’s conclusions are strident, but flawed and misleading. The Stodden Report replaces complexity, nuance, and meaningful data comparisons with numerical soundbites. The double-standards surrounding the incorporated data are among the worst cases I have seen in 25 years of teaching, publishing and studying statistics and statistical communication. Data from Uber is minimized at every turn, while comparison data receives expansive treatment. Every data choice is made in a predictable fashion: any data choice that can be made to help the Defendant, is made, and contrary data is omitted.

statistics might be a name, but I don't think there is a name for this arithmetic.”). (“Stodden Dep”) at 257:22-258:23, 260:12-18, 266:24-265:13; 268:24-25. .”)

² The remaining five comparisons occupy a fraction of the Stodden Report. The five valid comparisons are the following: comparing public transportation to rideshare/taxi using a survey from UCSD; comparing sexual assault rates between Uber and Lyft for two time periods; and three implicit comparisons of sexual assault rates for Uber at three different times.

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10. The following sections enumerate and illustrate these failures to adhere to the most basic statistical principles.

IV. Erroneous Conclusions Driven by Failure to Use Generally Accepted Statistical Principles and Methods

11. The Stodden Report assembles a disparate set of numbers, compares them erroneously, and arrives at a faulty conclusion. In doing so, the Report makes inferential arguments while ignoring the entire body of basic, inferential statistics. The Report cites a reasonable guide to statistical practice, “Reference Guide on Statistics” from *Reference Manual on Scientific Evidence*.³ This document, created for a legal audience, covers the basics and reflects the types of materials that Dr. Stodden and I have both learned and taught. I will refer to this manual repeatedly as I illustrate the shortcomings of the Stodden Report. Failure to follow standard practices leads the Report’s opinions awry; following those procedures would have exposed critical assumptions, essential to correcting the errors in the Report.⁴

12. As I show below, in Section VI, with straightforward, standard analyses, the Stodden Report would have arrived at the opposite of its central conclusion, which is this: “I conclude that the rate of reported incidents for rides on Uber’s platforms is extremely low compared to other available and relevant rates.”⁵ With a properly executed analysis, the Report would have found that surveyed Uber riders feel as unsafe as most riders on public transportation, contrary to Uber’s carefully cultivated brand perception of safety and despite its much higher price.

13. As mentioned above, the Stodden Report habitually compares numbers inappropriately. The Stodden Report compares those numbers as ratios, which are summarized in Tables 1 and 2 of the Stodden Report. To calculate those ratios, Dr. Stodden compared broadly, two sets of numbers. One set of numbers (the denominator) is derived from Uber’s tallies of sexual assault and misconduct reports from 2017 through 2024, generally 2021–22. The other set of numbers (the numerator) is derived from tallying responses to surveys conducted by various California public transit operators. I will begin by explaining those numbers.

14. The first number in Stodden’s comparison is a purported incident rate based on a particular subset of Uber data. This rate is also a ratio of two numbers. In

³ Kaye, D. H., & D. A. Freedman (2011), “Reference Guide on Statistics,” in *Reference Manual on Scientific Evidence*, Washington, D.C: National Academies Press, pgs. 211–302.
<https://nap.nationalacademies.org/read/13163/chapter/7>. (“Kaye & Freedman (2011)”)

⁴ Kaye & Freedman (2011) at 271 (“When expert testimony relies on statistical models, the court may well inquire, what are the assumptions behind the model, and why do they apply to the case at hand?”).

⁵ Expert Report of Victoria Stodden, PH.D. ¶ 12, Sept. 26, 2025. (“Rep. Stodden”)

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most of the Report, the numerator is the number of sexual assaults reported in Uber's Safety Reports.⁶ This number includes only five categories of sexual assault, excluding five additional categories of sexual assault and eleven categories of sexual misconduct which were known to Uber, but not included in their Safety Report. It also excludes every incident that Uber categorized as sexual assault or sexual misconduct but did not categorize further into one of the 21 categories. The denominator is the number of Uber rides in a time period. There are several time periods discussed in the Report and I will refer to the rates from 2017–18, 2019–20, and 2021–22 as “Uber SR SA 17-18,” “Uber SR SA 19-20,” and “Uber SR SA 21-22,” respectively. The numbers calculated this way used in Table 1 of the Stodden Report. Survey responses are divided by the Uber SR SA 21-22 rate. In Table 2, the Stodden Report switches to using a rate with a numerator of all SA/SM reported to Uber from 2024. I will refer to this rate as “Uber SA/SM 24.” In some instances, the Report uses a numerator of all SA/SM from 2022 (“Uber SA/SM 22”). The Report does not explain why these different rates are being chosen for different comparisons.

15. The second number in the Stodden Report's comparison are numbers chosen somewhat arbitrarily to compare to the Uber rates. These comparisons make up the 41 comparisons the Report makes in error, and I have tallied the comparisons in parentheses. The following comparisons are made:

- Uber SR SA 21-22 is compared to a selection of responses from nine surveys by municipal transportation organizations (18 comparisons). In most cases, the Uber rate is compared to a percentage of respondents indicating they had suffered sexual assault or witnessed it. These comparisons are presented in Table 1 and outlined in the text of Stodden's Report.⁷ I will explain the shortcomings of this comparison below.
- Uber SA/SM 23-24 is compared to the same selection of responses from the same surveys (18 comparisons).
- Uber SR SA 21-22 is compared to the rate of homicides in the United States in 2022 and the rate of fatal traffic accidents in the United States in 2022 (2 comparisons).

⁶ Uber. US Safety Report (2017-2018). Accessed Oct. 24, 2025. https://www.uber-assets.com/image/upload/v1575580686/Documents/Safety/UberUSSafetyReport_201718_FullReport.pdf. (“Uber Safety Report (2017-2018)”); Uber. US Safety Report (2019-2020). Accessed Oct. 24, 2025. <https://drive.google.com/file/d/1r2gUgnux2MzM4YMi6D3nwHJb2UaZ5Yjv/view?usp=sharing&uclid=ef753a91-aa7c-498a-a803-3ce3c48b9c08>. (“Uber Safety Report (2019-2020)”); Uber. US Safety Report (2021-2022). Accessed Oct. 24, 2025. <https://uber.app.box.com/s/lea3xzb70bp2wxek3k3dggk2ghcyvr687x3?uclid=ef753a91-aa7c-498a-a803-3ce3c48b9c08>. (“Uber Safety Report (2021-2022)”).

⁷ Rep. Stodden ¶ 26.

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- Uber SA/SM 22 is compared to these same rates of homicides and fatal traffic accidents (2 comparisons).
- The rate of rape, the most serious incident type, is compared to the rate of lightning strikes in the United States (1 comparison).⁸

16. I explain below in detail how these comparisons are inappropriate. Here, I focus on how reliance on statistical training and standard practice might have salvaged the Report.

17. In her deposition, Dr. Stodden admitted to not using any statistical modeling,⁹ stating. “what I'm reporting here, descriptive statistics, I'm not making inferences....”¹⁰

18. Both rhetoric and statistics employ the term, “inference.” In statistics, inference is concerned with the conclusions that can be drawn from data.¹¹ Inference is used to draw conclusions about a population based on a sample or compare data from samples. To do inference, measures of uncertainty are critical,¹² and probabilistic statements are essential—descriptive statistics are not sufficient.¹³

⁸ As bewildering as this comparison is, it also misreports these Uber rates. The Stodden Report states in paragraph 31, “Uber’s rate of reported incidents in the most serious category of sexual assault, non-consensual sexual penetration, is even lower at ~1 in 5,000,000 rides in each year from 2017 to 2022.” The Stodden Report cites the Uber’s 2021–22 Safety Report and correctly transcribes the two-year (not annual) rates reported there, but that rate for 2017 to 2022 is higher. Using data produced by Uber in this matter, I have calculated the annual rate of rape on the platform. Both 2017 and 2020 had higher rates of rape than 1 in 5,000,000. 2017 was 20% higher and 2020 was 10% higher. Though Uber has not released a safety report for 2023–24, those annual rates also exceed 1 in 5,000,000, by 20% in both years.

⁹ Stodden Dep. 258:18-21 (“Q. And you didn't have statistical model to arrive at any numbers in your report, right? A. That's correct. I didn't run any statistical models for this report.”] 258:18-21...”).

¹⁰ Stodden Dep. at 259:17-23 (“So what I'm reporting here, descriptive statistics, I'm not making inferences, and the descriptive statistics, for example, are in Table 1 and Table 2. There may be other descriptive statistics that I report, but most of what I'm doing in this reports [sic] is statistics that are descriptive.”).

¹¹ Kaye & Freedman (2011) at 240 (“The inferences that may be drawn from a study depend on the design of the study and the quality of the data (*supra* Section II).”).

¹² *See*, Kaye & Freedman (2011) § III.E Is an Appropriate Measure of Variability Used?

¹³ S. Sinharay (3d ed. 2010), “An Overview of Statistics in Education,” in *Peterson, P., et al., Eds., International Encyclopedia of Education*, Elsevier Ltd., Amsterdam, pgs. 1-11. <https://doi.org/10.1016/B978-0-08-044894-7.01719-X> (“Some preliminary conclusions may be drawn by the use of EDA or by the computation of summary statistics as well, but formal statistical inference uses calculations based on probability theory to substantiate those conclusions.”).

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19. In rhetoric, inferential arguments involve building a chain of propositions, leading to propositions whose veracity stems from the truth of initial propositions, facts, or evidence.¹⁴ Despite her protestations at her deposition to the contrary, the Stodden Report makes inferential claims, deploying rhetorical inference without using statistical inference.¹⁵ This is not forthright communication. Dr. Stodden's erroneous comparisons are attempts to compare the Uber rates to survey responses. As discussed more fully below, comparing survey responses to self-reporting responses is inappropriate from a statistical perspective because those fractions are measuring entirely different quantities, with units that cannot be reconciled. Therefore, as would be expected based on rudimentary statistical principles, the survey responses suggest rates that appear higher than the Uber rates used in the Stodden Report.¹⁶ The rate comparisons, or ratios, are then deployed with attempted rhetorical force, in ways that could deceive an audience of average numeracy, such as a finder of fact.

- “Based on my review of rates of reported incidents, I find that the rate of reported incidents for rides on Uber’s platform is orders of magnitude lower than rates reported for public transportation, specifically the rates reported by the ten largest transportation authorities in California.”¹⁷
- “I conclude that the rate of reported incidents for rides on Uber’s platforms is extremely low compared to other available and relevant rates.”¹⁸
- “...[R]ates of alleged sexual assault and misconduct on rides on the Uber platform for the five most serious categories of sexual assault, as well as

¹⁴ Merriam-Webster. Definition of Inference. Accessed Oct. 24, 2025. <https://www.merriam-webster.com/dictionary/inference>

¹⁵ See footnote 1.

¹⁶ It is worth stating, that the survey response rates being higher than Uber’s rates in the Stodden Report is a near mathematical certainty. For every survey used, the only *possible* proportion that would compare favorably with the rate used in the Stodden Report would be 0% of respondents.

To see this, note that the denominator of, for instance, Uber SA/SM 21-22 is 1.89 billion rides in Uber’s produced data. The largest sample size among the surveys is Los Angeles County Metropolitan Transportation Authority survey with 7,760 respondents. A single respondent therefore represents 0.013% of the respondents. If survey responses such as these were comparable to rates of rides, which they manifestly are not, a single “yes” response on a sexual assault question would represent 0.013% of 1.8 billion or 243,760 incidents. In comparison, Uber received reports of approximately 86,000 SA/SM incidents in 2021–22. In addition to being the wrong measure for comparison, the surveys lack granularity for this comparison. The pervasive missingness of confidence intervals in the Stodden Report exacerbates the issue.

¹⁷ Rep. Stodden ¶ 12 (emphasis omitted).

¹⁸ Rep. Stodden ¶ 12.

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rates for all categories of reported sexual assault and misconduct, are both extremely low when compared to relevant benchmarks.”¹⁹

- “To contextualize rates of alleged sexual assault and misconduct on rides on the Uber platform, I compare them to available incident rates reported for other transportation options.”²⁰
- “Notwithstanding any methodological differences, I consider these transit authority surveys to be relevant and informative benchmarks for assessing the relative prevalence of sexual assault and misconduct on the Uber platform.”²¹
- “Although only an indicative comparison, in relative terms, Uber’s 2021–22 rate for the five most serious categories of sexual assault is thus about **50 times smaller** than the rate of homicides in the United States (7.5 per 100,000 people in 2022), and about **90 times smaller** than the rate of fatal traffic accidents (13.4 per 100,000 people in 2022) in the U.S.”²²

20. The inferential implications are clear: Dr. Stodden suggests that it makes sense to perform arithmetic on these two numbers, that the resulting comparison ratio is always large, implying the Uber rates are small, and thus Uber is relatively safe. Dr. Stodden professes not to be doing inference, however—and indeed she has not used a single basic measure of inferential statistics, particularly the analyses necessary to evaluate the inferences she seeks to make. As a result, the inferences she makes and conclusions she offers are based on flawed, improper methodology. The above claims are particularly concerning because they are quite persuasive looking. This Report is materially misleading to any non-statistician including finders of fact.

21. Dr. Stodden states that she holds the opinions of her Report to a reasonable degree of scientific certainty. In statistics, certainty is considered using statistical methods to evaluate whether a relationship between two or more factors is statistically significant, and the level of statistical significance and uncertainty is quantified using measures of uncertainty. This is a foundational teaching of introductory level statistics classes. The uncertainty of a claim is determined by a p-value and the statistical edifice of Null Hypothesis Statistical Testing (“NHST”) has grown up around this calculation. For instance, the National Library of Medicine has

¹⁹ Rep. Stodden ¶ 18.

²⁰ Rep. Stodden ¶ 19.

²¹ Rep. Stodden ¶ 23.

²² Rep. Stodden ¶ 31 (citations omitted).

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published a tutorial for medical professionals to follow to apply the tools of NHST.²³ Dr. Stodden did not calculate any measure of statistical significance or uncertainty to support her conclusions; she could not, because she used descriptive statistics only. Therefore, she cannot hold her opinions to a reasonable degree of statistical or scientific certainty.

22. There are statistical tests Dr. Stodden could have used to evaluate whether there a statistically significant relationship exists between the sets of numbers she compared, and the uncertainty surrounding each. The standard approach to comparing rates is the z-test for the difference in proportions.²⁴ Had the Stodden Report used this standard method then it would have invariably assessed the first assumption of this test: the two rates must be independent random samples from the populations of interest. The rates are described as $\frac{p}{n}$, where n is the sample size and p represents the observations with a given quality or response. It is impossible for the numbers Dr. Stodden is comparing to fulfill this assumption: *riders* on public transportation simply cannot be the same population as *rides* on Uber. The inappropriateness of the comparison would have been revealed at the first checkpoint.

23. There are other ways Dr. Stodden's comparison fail this assumption. The Uber Safety Report data is not a sample in any meaningful sense. It is a tiny subset of the data reported to Uber, itself a subset of the total incidents, since many incidents go unreported.²⁵ Further, it is over-representative of riders who are at little to no risk of sexual assault, namely male riders.

24. Uber's 2021–22 Safety Report documents these limitations under the heading "Limitations of Uber safety incident data":

We recognize that this data and our user base are neither a representative national sample nor, necessarily, a representation of the size or scope of sexual assaults, motor vehicle fatalities, or fatal physical assaults in other contexts. In addition, COVID-19 affected how, where, and when people used Uber, which makes yearly comparisons a challenge. As such, and because significant demographic and methodological differences may be present, Uber urges caution in comparing the data contained in this report with the findings of national prevalence estimates.

²³ Pernet C. Null hypothesis significance testing: a short tutorial. F1000Res. 2015 Aug 25;4:621. doi: 10.12688/f1000research.6963.3. PMID: 29067159; PMCID: PMC5635437.

²⁴ G.W. Snedecor & W.G. Cochran (8th ed. 1991), "Statistical Methods," Wiley-Blackwell, § 7.10.

²⁵ Opening Report § VIII.A Estimating the True Rate of Incidents.

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The Stodden Report did not heed this caution. While the Safety Reports describe these limitations, the Stodden Report does not describe them, make any effort to mitigate them, nor attempt to quantify the resulting error.

25. The rates Stodden compares in her Report are not—remotely—measuring the same things. The following table illuminates, by topic, the differences between the Uber reported rate and the survey data.

Aspect of Data	Uber	Transportation Survey
Rate	Incidents reported to Uber, non-anonymously, ²⁶ via an app or by phone, ²⁷ divided by rides.	Proportion of survey respondents answering “yes” to having experienced or witnessed sexual assault or rape on an anonymous survey.
Population Sampled	This is not a sample, as described above. Numerous factors may affect whether a rider who suffered sexual assault or sexual misconduct chooses to report to Uber.	An attempt at a random sample of public transportation riders in a one-to-two-week time period.
Observational Units	Each observational unit was a single Uber ride. Riders take scores to hundreds of rides per year. ²⁸	Each observational unit was a survey respondent. Municipal transportation riders typically ride hundreds of times per year. Most surveys asked about incidents over 6 or 12 months. ²⁹

²⁶ Additionally, if the report is against a driver, then the person a victim is reporting may well know the home address of the reporter.

²⁷ On rare occasion, Uber also receives report through media or law enforcement.

²⁸ UBER_JCCP_MDL_005608992.

²⁹ *E.g.*, Los Angeles DOT Transit. “Safety & Security Survey Findings and Recommendation,” Dec. 16, 2024. Accessed Oct. 24, 2025. https://cityclerk.lacity.org/online/docs/2024/24-0562_rpt_dot_4-2-25.pdf (“Almost half of respondent (49%) ride five to seven days a week with another 32% who ride

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Auditing	<p>Uber data underwent an auditing process. The Stodden Report professes to find this auditing important,³⁰ but only for Uber.³¹</p> <p>Before the audit, each category was clearly defined and auditors were trained on proper categorization.</p>	<p>Not only were the survey responses not audited, but they were also anonymous, so no auditing was possible.</p> <p>No definition of “sexual assault” was given, nor were clear distinctions between assault, misconduct, and harassment provided.</p>
Incident Type	Generally, only the “most serious” incidents on Uber. The most prevalent types of sexual assault were excluded, despite blanket language in the survey.	Undefined sexual assault. ³² In several cases witnessing a sexual assault is also included.
Adjustment for Underreporting	None.	Efforts were made by survey takers to ensure complete surveys.

three to four days a week.”); and, Long Beach Transit. “Transit Safety Survey Final Report,” Feb. 3, 2025. (“71.8% of respondents typically use LBT 3+ days a week”).

³⁰ Rep. Stodden ¶ 17 (“Thus, it was appropriate for Uber to publish the reported incident rates for the five categories that have the highest degree of consistency across Uber auditors, as these categories of claimed sexual assault could be measured with a high level of reliability.”).

³¹ Stodden Dep. 219:16-18 (“Q: Were the transportation company reports audited in any way that you are aware of? A. I don't believe that they were audited.”] 219:16-18...”).

³² There is no reason to think that survey respondents have a precise understanding of the SA/SM taxonomy and evidence that they do not. The 2019 #MeToo survey cited by the Stodden Report (n. 24) includes a list of the most frequently selected forms of “sexual harassment and assault.” This is the category that gives rise to the “fourfold” difference between public transportation and rideshare/taxi. The list illustrates the broad range covered by the question, including the following among the top five: “Someone whistling, honking, making kissy noises;” “Someone saying things like, ‘Hey Baby,’ ‘Mmmm Sexy,’ ... or similar comments in a way that is disrespectful and/or unwanted and/or made you feel unsafe;” “Someone calling you a sexist slur;” “Someone purposely touching you or brushing up against you in an unwelcome, sexual way;” and “Someone talking about your body parts inappropriately or offensively, saying sexually explicit comments, or asking inappropriate sexual questions.”

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Qualitative Categories	The Uber rates attempt to count only one report per incident.	The surveys include answers from victims and witnesses, greatly increasing the rate.
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26. Dividing one of these rates by another (the methodology used by Stodden) is not a statistically sound methodology and provides no meaningful information. I will walk through one illustrative example that hits the primary shortcomings of the comparisons in the Stodden Report. The first comparison offered by the Report, before the rates have been discussed or explained, is this:

Los Angeles County Metropolitan Transportation Authority (“LACMTA”)’s 2024 survey reports that ~1 in 6 respondents “often,” “occasionally,” or “rarely” experienced or witnessed “sexual assault or rape” when using the metro in the past six months, which is about 118,400 times higher than the rate of alleged sexual assault on rides on the Uber platform in 2021–22 (~1 in 700,000).

27. Before I explain how this ratio, 118,400, is built, I demonstrate its absurdity. When people read a *rate* multiplier, they naturally to treat the number as a *count* multiplier as well. Typically, when rate multipliers are mentioned, the rates are commensurate with each other. If you drive twice as fast as me, you go twice as far in the same unit of time. Uber’s 2021–22 Safety Report, reporting on 5 of the 21 categories of sexual assault and misconduct, stated that there were 2,717 total reported incidents. One could multiply these 2,717 reported incidents by this ratio, 118,400, to attempt to estimate the number of assaults on LACMTA. The result, 321,692,800, is implausibly high, nearly the entire population of the United States. In 2024, LACMTA had an estimated ridership of 311,253,565.³³ This would more than one serious sexual assault for every *ride*, scores of assaults annually per rider, before accounting for underreporting.³⁴

28. The ratio, 118,400, is composed of a numerator and a denominator. The numerator is a piece of data from the LACMTA 2024 ridership survey. The numerator is a fraction, representing the number of survey respondents answering a question about witnessing or experiencing “sexual assault or rape” in the last six months. About five of every six survey respondents put the answer “never”. The remainder put “often,” “occasionally,” or “rarely.” This fraction, 17%, is our numerator. Given

³³ Los Angeles Metro. "Interactive Estimated Ridership Stats," undated. Accessed Oct. 24, 2025. <https://opa.metro.net/MetroRidership/>.

³⁴ This type of extrapolation is completely inconsistent with the survey and demonstrates how the Stodden Report has violated basic statistical principles and norms, rendering her conclusions baseless.

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7,760 survey respondents, the smallest possible non-zero rate this survey can calculate is 1 in 7,760. This rate, 90 times larger than Uber SR SA 21-22, is the smallest effect that can be measured by this survey, the largest survey considered in the Stodden Report.³⁵ If a single survey respondent on this largest, most-granular survey answers yes to a question, that immediately creates a rate that is, at least 90 times larger than Uber SR SA 21-22.

29. The denominator, Uber SR SA 21-22, is one of the many rates of sexual assault and misconduct that Uber calculated or had the ability to calculate. In the 2021-22 Safety Report, Uber disclosed 2,717 incidents of reported sexual assault in five categories. The report indicated this was based on 770,946,225 rides in 2021 and 1,120,632,297, as the company began bouncing back from the pandemic. The total rides, 1.89 billion across the two years, can be compared to the purported number of incidents to calculate the rate the Stodden Report describes, “~1 in 700,000.” In percentages, the number is 0.00014%, as it represents the average number per individual ride.

30. Dr. Stodden makes numerous, undocumented assumptions to compare these rates. For instance, there is an assumption that the differences I describe above do not affect the comparison. The closest the Stodden Report comes to wrestling with these assumptions is in paragraph 22:

While there are methodological differences between Uber’s and public transportation providers’ reports, I consider the public transportation providers’ reports to be relevant and informative benchmarks for Uber’s reported incident rates.

31. Tellingly, there is no explanation for why the Stodden Report treats these surveys as relevant and informative. This is methodology by fiat.

32. A critical question, when attempting to use a survey to provide information about a distinct quantity, is the question of external validity.³⁶ Given the methodological differences between the surveys and the Uber rates and the entirely different manner by which they are calculated, no argument for external validity can be made. Nor does the Stodden Report offer one.

³⁵ The smallest survey was done by the San Diego MTS, with 507 respondents. The minimal detectable effect for this survey, 1 in 507, is 1380 times larger than Uber SR SA 21-22. If this survey can measure it, then the Stodden Report gets three of its ballyhooed “*orders of magnitude*” for free.

³⁶ Kaye & Freedman (2011) at 222 (“Any study must be conducted on certain subjects, at certain times and places, and using certain treatments. To extrapolate from the conditions of a study to more general conditions raises questions of external validity.”).

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33. In addition to failing to account for external validity, the Stodden Report runs afoul of measurement instrument validity which is a core statistical principle.³⁷ The municipal Transportation Surveys³⁸ do not measure the same thing as the Uber incident data measures. The Stodden Report cannot modify the municipal transportation authorities' survey methodology or instrument. But Dr. Stodden could have attempted to align the Uber rates with the survey. For instance, the surveys report results in terms of riders. Dr. Stodden had access to Uber's data and could have accounted for the scores or hundreds of rides taken annually by riders. Similarly, the Stodden Report could have attempted to account for the vastly different number of potential sexual assaulters on a bus versus in an Uber. Dr. Stodden could have attempted to estimate the number of assaults on public transportation perpetrated by drivers. No efforts to create a valid measurement instrument were made. It is foundational in statistics to be clear on the unit of analysis but here Dr. Stodden violates this foundational statistical principle by obscuring the unit of analysis.³⁹

34. The plain difference in meaning between the Uber rates and survey rates makes it impossible to put the calculated ratios into context. The report implicitly assumes that these rates are measuring roughly the same phenomenon. Above, I carried out an arithmetic exercise demonstrating the absurdity of the comparison. We can derive another example by treating the LACMTA rate as if it

³⁷ Kaye & Freedman (2011) at 228 ("A valid measuring instrument measures what it is supposed to.").

³⁸ Los Angeles County Metro. Transit. Authority. "Street Harassment Survey and Focus Groups," Mar. 2025. Accessed Oct. 24, 2025. <https://cdn.beta.metro.net/wp-content/uploads/2025/04/04091252/Street-Harassment-Survey-Focus-Group-Report-March-2025.pdf>; Orange County Transportation Authority. "Rider Safety Perception Survey," Dec. 19, 2024. Accessed Oct. 24, 2025. <https://www.octa.net/news/publications/market-research/2024-rider-safety-perception-survey/>; Santa Clara Valley Transportation Authority. "VTA Safety & Harassment Survey," 2024. Accessed Oct. 24, 2025. www.vta.org/sites/default/files/2024-10/Street-Harassment-Survey-Results.pdf; San Diego MTS. "Transit Safety Survey Findings Report," 2024. Accessed Oct. 24, 2025. www.sdmts.com/sites/default/files/attachments/mts-harassment-survey-findings-report.pdf; Long Beach Transit. "Transit Safety Survey Final Report," Feb. 3, 2025; Alameda Contra Costa Transit. "Understanding Rider Perceptions on Safety," Dec. 2024. Accessed Oct. 24, 2025. www.actransit.org/sites/default/files/2024-12/AC%20Transit%20Safety%20Survey%20Prelim%20Findings%20Final.pdf; BART. "BART Street Harassment Survey (SB 434)," Nov. 2024. Accessed Oct. 24, 2025. <https://www.bart.gov/sites/default/files/2024-11/BARTStreetHarassmentSurveySummary2024%28SB%20434%29.pdf>; Los Angeles DOT Transit. "Safety & Security Survey Findings and Recommendation," Dec. 16, 2024. Accessed Oct. 24, 2025. https://cityclerk.lacity.org/online/docs/2024/24-0562_rpt_dot_4-2-25.pdf; and, Wasserman, J. et. al. "Capturing Transit Rider Perspectives on Safety and Harassment: Lessons from San Francisco," Feb. 2025. Accessed Oct. 24, 2025. <https://escholarship.org/uc/item/82g7152f>. (collectively, "Transportation Surveys")

³⁹ Kaye & Freedman (2011) § V.C.2 What is the Unit of Analysis?

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applied to Uber. If we multiply the 17% measured by the LACMTA survey by the 1.89 billion rides completed by Uber in 2021–22, then the survey would imply riders of 321 million rides had experienced or witnessed sexual assault in any six-month period. This is nearly one ride for every person in the United States.

35. In contrast, the Stodden Report makes, in paragraph 20, a somewhat valid comparison of rates.

In 2019, the University of California San Diego Center on Gender Equity and Health published results from a national survey on sexual harassment and assault.

Table 6 in the report finds the prevalence of sexual harassment on “[m]ass transportation (bus, subway, metro, train, or airplane)” to be experienced by 18% of riders (25% of female and 10% of male) while the prevalence of sexual harassment on “[t]axi or ride-sharing service driven by someone you didn’t know” to be 4% (4% for both females and males). This is more than a fourfold increase in the prevalence of sexual harassment on public transportation as opposed to taxis and ride-sharing services.⁴⁰

36. This comparison is apples-to-apples: the same measure of sexual harassment asked of the same population using the same sampling plan and survey instrument. The number of two-way interactions in a given group increases exponentially as the group size increases,⁴¹ which may very well explain this difference. I will show evidence below, however, that calls into question this finding, under the assumption that SH is well-correlated with “feeling safe.”

37. This comparison could have been the jumping off point for a statistical analysis. The survey had 2,219 respondents, giving a general margin of error of 2.1%. These percentages are relatively precisely estimated and the difference is

⁴⁰ I say this comparison is “somewhat valid” because it is comparing two estimates from the same survey. These matters concern sexual assault by a *driver*, however, and in that respect the comparison is invalid. The UCSD survey is not estimating driver-perpetrated sexual harassment.

⁴¹ In a two-person group, such as a rider and driver on the Uber platform, there is a single pair. In a four-person group, the number of pairs jumps to 6. On a mostly empty bus with 10 people, there are 45 pairs. A crowded city bus may hold 60 people and an articulated bus may hold 100. On these buses there are 1,770 and 4,950 pairs, respectively. It would take 5,000 Uber rides to generate this many pairings of passengers; in the language of the Stodden Report, the number of pairs on an Uber ride is “*orders of magnitude lower*.” In this case, three orders of magnitude ($10 \cdot 10 \cdot 10 = 1,000$).

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meaningful. This survey describes the limitations of its methodology, omitted from the Stodden Report.⁴²

Reliance on Self-Report Measures: Sexual harassment and assault measures rely on self-report and are thus vulnerable to recall biases and response biases. The consistency of the responses to the repeated questions in the 2018 and 2019 survey suggests the validity of study findings, however.

Challenges in Measuring Use of Harassment and Assault: This year's survey, for the first time, includes a section on self-reported use of sexual harassment and assault behaviors. Measuring self-reported use of harassment and assault carries inherent risks and limitations, including a well-documented likelihood of producing results that reflect underreporting of perpetration behavior. ... Furthermore, the survey asked identical questions related to use of harassment and assault behaviors to respondents of all gender identities. Findings therefore require careful consideration related to ways in which the qualitative nature or cultural context of certain acts/questions may shift based on the gender of the person using the behavior and their relative position in a patriarchal society.

38. The Stodden Report offers this evidence of fourfold difference in rates between transportation modalities, then goes on to quote differences from 118,400⁴³ to 27,000⁴⁴ to 54.⁴⁵ The extreme difference between results of the National Study and the Stodden Report highlight the extreme flaws in Stodden's methodology.⁴⁶ The Stodden Report does not explain the discrepancy between this survey on SH, with its fourfold comparison ratio, and the mixed-rate ratios calculated in other parts of the Report. These discrepancies highlight the methodological flaws in her approach.

⁴² UC San Diego Center on Gender Equity and Health. "Measuring #MeToo: A National Study on Sexual Harassment and Assault" p. 16. Accessed Oct. 24, 2025. <https://www.raliance.org/wp-content/uploads/2019/04/2019-MeToo-National-Sexual-Harassment-and-Assault-Report.pdf>.

⁴³ Rep. Stodden ¶ 26.

⁴⁴ Rep. Stodden ¶ 26.

⁴⁵ Rep. Stodden Table 2.

⁴⁶ Note the National Study compares reports of sexual harassment on public transportation to reports of sexual harassment on rideshare and taxis. The study also evaluated rates of sexual assault on public transportation versus rideshare and taxi but does not report the specific findings for either group. However, 3% or less of both public transportation and rideshare/taxi users reported experiencing sexual assault in the National Study. (National Study p. 27). Therefore, based on the National Study, the difference between rates of sexual assault on Uber versus public transportation may be even lower than 4%.

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39. Statisticians calculate confidence intervals to provide the range of plausible estimates for a quantity.⁴⁷ The lack of confidence intervals in the Stodden Report does not stem from the difficulty of calculating them. Setting aside the inappropriateness of the ratios calculated, I will illustrate the impact of adding confidence intervals to two ratios in the Stodden Report. In Table 1, under the column heading “Multiple of rate of ‘experienced or witnessed sexual assault or rape’ over Uber’s reported incident rate of sexual assault in 2021–22,” a value of 118,400 is reported for LACMTA. This compares the LACMTA survey question rate to the Uber SR SA 21-22 rate.

40. In Table 2, under the column heading “Multiple of rate of ‘experienced sexual assault or rape’ over Uber’s reported incident rate for all categories of sexual assault and misconduct in 2024,” a value of 370 is reported for Orange County Transportation Authority (“OCTA”). This ratio represents the OCTA survey response rate of 2.1% compared to the Uber SA/SM 24 rate. The numerator of this rate is 85,714 total incidents and this rate is 1 in 17,700.

41. Because the Stodden Report repeatedly switches which Uber rate is being compared, I handle the two examples serially. In my Opening Report, I carried out an analysis to estimate the true rate of incidents, considering underreporting.⁴⁸ The LACMTA ratio is calculated from the Uber SR SA 21-22 incident rate, with 2,717 reported incidents. With underreporting accounted for, I estimate the true number of incidents in the five safety report categories as 14,064, with a 95% credible interval of 8,525 to 25,215.

42. I am now in position to illustrate two concepts. The first is the spread of potential ratios consistent with the data reported in the Stodden Report. The second is the range of likely ratios considering underreporting, something not done in the Stodden Report. I carry out this analysis to illustrate the easily calculable uncertainty inherent in the Stodden Report point estimates of ratios, not to imply that I think these numbers are directly comparable in this way.

43. With a sample size of 7,760, the 95% confidence interval around the LACMTA 17% is 16.1% to 17.9%. There is no need to calculate a confidence interval for the Uber SR SA 21-22 rate, as it is essentially a census of what it purports to

⁴⁷ Kaye & Freedman (2011) at 284-85 (“Confidence interval. An estimate, expressed as a range, for a parameter. For estimates such as averages or rates computed from large samples, a 95% confidence interval is the range from about two standard errors below to two standard errors above the estimate. Intervals obtained this way cover the true value about 95% of the time, and 95% is the confidence level or the confidence coefficient. See central limit theorem; standard error.”).

⁴⁸ Opening Report § VIII.A.

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measure. The worst-case bounds⁴⁹ on the LACMTA rate does not have exact 95% coverage but is easy to calculate by comparing the endpoints. If I do this with the LACMTA ratio of 118,400, I have an interval from 112,417 to 124,291.⁵⁰

44. Accounting for underreporting, I do have a confidence interval for the true rate of these most serious incidents in 2021–22. Rather than the rate of 1 in 700,000 from the Stodden Report, a better estimate of the true rate of these incidents is 1 in 134,000, with a 95% credible interval of 1 in 75,000 to 1 in 222,000.

45. Comparing these rates to the LACMTA response rates, I calculate that the ratio of LACMTA reporting to Uber's most serious incidents per ride, accounting for underreporting, range from 12,100 to 39,600. These values, far from the ratio of 118,400 estimated in the Stodden Report, represent tremendous range, indicating the instability of these ratios.⁵¹

46. Turning to the OCTA ratio of 370 from Table 2, I can repeat the same exercise. The numerator of this ratio is based on the OCTA rate of 2.09% and I estimate the 95% confidence interval is 1.75% to 2.4%. The denominator is the Uber SA 24 rate, 1 in 17,700. This Uber rate does not require a confidence interval, again because it is a census of reported incidents. This rate is calculated using Uber SA/SM 24 from 85,714 incidents. I estimate true number of incidents across these categories to be 283,186, with a 95% credible interval of 171,723 to 503,526. These translate to a true rate of incidents to from 1 in 3,010 rides to 1 in 8,820 rides.

47. Ignoring underreporting and mimicking the Stodden Report, for the OCTA ratio of 370, I have an interval from 309 to 429.⁵² Account for underreporting, the OCTA ratio from Table 2 ranges from a ratio of 52 to 214, vastly smaller than the ratio of 370 reported in the Stodden Report.

48. Illustrating these calculations brings one face-to-face with the contortions and machinations of the Stodden Report. Rather than providing reliable estimates with uncertainty intervals, the report rattles off descriptive statistics calculated in an Excel file referenced, but not discussed in the Stodden Report, as "Workpaper 1." Comparisons change table to table and paragraph to paragraph. As a professional statistician, I observe that this approach lacks rigor. Given Dr.

⁴⁹ "Worst-case" in a statistical sense means the "widest possible." These are found by taking the highest plausible value of the denominator and pairing it with the lowest possible value of the numerator, and vice versa.

⁵⁰ Using the Delta Method, a standard approach for calculating the confidence interval of a ratio, the range is 111,250 to 125,911.

⁵¹ And, to belabor the point, they are not sensible ratios to calculate.

⁵² Again, the Delta Method gives a comparable interval, 315 to 433.

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Stodden's unfamiliarity with this spreadsheet,⁵³ which held all calculations used in her Report, it seems plausible that this spreadsheet was not created by Dr. Stodden. This unfamiliarity is evidence that she could not reproduce her own work, either because it was not created by her or because she had insufficient familiarity with the underlying calculations.

V. Lack of Fit to the Facts of this Matter

49. In the section above, I explained the differences between the Uber rates reported in the Stodden Report and the survey responses to which that Uber rate is compared. These rates are fundamentally incomparable and the Stodden Report's "descriptive statistics" do not describe any quantities meaningful to the facts of these matters or the experience of the Plaintiffs.

50. Nevertheless, the Stodden Report asserts that these disparate sets of rates *are* comparable, asserting repeatedly that these comparisons are valid:

- "Based on my review of rates of reported incidents, I find that the rate of reported incidents for rides on Uber's platform is *orders of magnitude lower* than rates reported for public transportation."⁵⁴
- "To contextualize rates of alleged sexual assault and misconduct on rides on the Uber platform, I compare them to available incident rates reported for other transportation options."⁵⁵

51. The comparisons receive no meaningful justification, beyond the fact that buses and trolleys are forms of transportation.⁵⁶ I understand this litigation is

⁵³ Stodden Dep. 115:10-117:23 ("Q. Are you familiar with what you referred to as Workpaper 1? A. I know that when there is a calculation, for example, if we create a table or a figure and so on, if there are calculations that have gone into that, I'll make sure it gets included as a work paper so that it's clear how I arrived at whatever numbers or results there are. So if there are work papers here, that is what that would be referring to. ... Q. The numbers in your report rely on some calculations, right? A. Which numbers? The numbers in the tables—is that what you're referring to? Q. The numbers in Table 1 and Table 2 of your report rely on some calculations that were done, correct? A. Yes, that's right. We did do calculations, yeah. ... Q. Okay. There are six references in your report to Workpaper [sic] 1. Workpaper 1 is not ringing any bells to you? A. I would have to take a look. Let me take a look. ... A. Okay. I do see it. Thank you. I apologize, right at the end, I see Workpaper 1. You should have that. Q. I do have that. My question for you— A. Do I have it? No, I don't have it in the printout. Probably I should. I don't.").

⁵⁴ Rep. Stodden ¶ 12.

⁵⁵ Rep. Stodden ¶ 19.

⁵⁶ Rep. Stodden ¶ 21 ("Comparing ride-sharing reported incident rates to rates reported on public transportation such as buses and trains is instructive because several studies show that rides with

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about women who were sexually assaulted by their Uber drivers. I have not seen any evidence to indicate that public transportation was an available alternative option for these women or that sexual assault rates on public transportation would be relevant to their decision to use Uber for the trip where they were assaulted. A young woman has many options when going out to a bar. When it comes to her chances of being sexually harassed, these modalities are not substitutes.

52. The Stodden Report is cavalier when it comes to time periods, switching time periods for the Uber rates from 2021–22, to 2024, to just 2022, without rationale. No efforts were made to synchronize periods with the survey data or the incident dates for the Plaintiffs.

53. Although the Plaintiffs are from multiple states and the Uber rates are national, the Stodden Report is satisfied with using only public Transportation Surveys from California. The Stodden Report states that Dr. Stodden was unable to find surveys for other relevant states such as Arizona or North Carolina.⁵⁷

54. As briefly described above, the California transit surveys measure vastly different quantities than the reported Uber rates. Respondents to the survey simply checked a box for experience of undefined sexual assault. The Uber incidents require an elaborate reporting mechanism including identifying the exact date and the offending party, require some amount of substantiation to be counted, are not anonymous, and generally require reporting against someone who knows your whereabouts, potentially your home address. Women are vastly more likely to suffer sexual assault, yet the Uber rates include all male rides.

drivers matched on ride-sharing platforms are seen by consumers as substitutes for public transit services.”).

⁵⁷ Rep. Stodden n. 23 (“I understand from counsel that the litigation involves cases from Arizona, California, and North Carolina. I conducted a search for publicly available data on sexual assault rates on public transportation systems in these three States. I have identified data on reported incited rates for California, which I discuss in Section VI.B. I have not identified similar data for Arizona or North Carolina.”).

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55. The Stodden Report makes cursory reference to methodological differences between the surveys and the Uber rates⁵⁸ but are summarily dismissed with a wave of a hand.⁵⁹

56. I mentioned above that, of the 46 numerical comparisons made by the Stodden Report, 41 are manifestly invalid. The valid comparisons, which are not emphasized in the Report, are the following:

- The comparison between SH on public transit versus rideshare/taxis described above, giving rise to the “fourfold” estimate.⁶⁰
- The two comparisons made between Uber and Lyft rates of the five most serious rates of sexual assault appear valid.⁶¹ In contrast to the hyperbolic emphasis of ratios earlier in the report, the fact that Uber’s SA rate is 25% higher than Lyft’s is elided.⁶²
- There are three implicit comparisons of Uber rates to each other toward the end of the Report.⁶³

57. The lack of fit to the matter at hand goes from bad to worse in the final section of the Stodden Report. In Section VI.E, the Uber SR SA 21-22 and Uber SA/SM 22 rates are compared to homicides and fatal traffic accidents. These

⁵⁸ “While there are methodological differences between Uber’s and public transportation providers’ reports, I consider the public transportation providers’ reports to be relevant and informative benchmarks for Uber’s reported incident rates. These methodological differences include differences in the relevant population (U.S. vs. California), data collection processes (in-app reporting vs. field surveys), sampling (rider reporting vs survey sampling), the scope of questions (incident reporting vs. questionnaires), information collected (in-ride incident vs. experience over a period of time), and taxonomy of sexual misconduct (Uber’s Sexual Violence Taxonomy vs. “sexual assault and rape”). Rep. Stodden ¶ 23.

⁵⁹ Rep. Stodden ¶ 23 (“Notwithstanding any methodological differences, I consider these transit authority surveys to be relevant and informative benchmarks for assessing the relative prevalence of sexual assault and misconduct on the Uber platform.”).

⁶⁰ Rep. Stodden ¶ 20.

⁶¹ Rep. Stodden ¶ 30.

⁶² The Uber rate of ~1 in 680,000 is 25% higher than Lyft’s rate of ~1 in 540,000. Rep. Stodden ¶ 30 (“Lyft’s reported incident rates for the five most serious categories of sexual assault were ~1 in 430,000 rides for the years 2017–19, and ~1 in 540,000 rides for the years 2020–22. These numbers are very similar to those for Uber—specifically, Uber’s reported incident rate for the five most serious categories of sexual assault for 2017–19 is ~1 in 420,000 rides, and it is ~1 in 680,000 rides for the years 2020–22.”).

⁶³ Rep. Stodden ¶ 31.

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comparisons are explained as “only an indicative comparison.”⁶⁴ I am left wondering what they could possibly be indicative of. The Report ends with a disclosure of yet another rate: the annual rates of rapes between 2017 and 2022. As I discussed in n. 8, *supra*, these rates are misreported and 2023–24 rates are ignored. Underreporting is similarly ignored.⁶⁵

58. These rates are compared to the rate of being struck by lightning. While the rate of being struck by lightning is not “relevant” in any sense, I can see the rhetorical device for what it is. Being struck by lightning is rare and the Stodden Report wishes to make the case that rape on the Uber platform is rarer still.

59. Lightning strikes of humans are rare for several reasons. Per the CDC, there are 40 million lightning strikes in the United States every year, with roughly 40 people being struck. Part of the reason that the rate of strikes is low is simple—the risk is well known, not concealed, and people know how to protect themselves from that risk: most people go inside when there are thunderstorms. Nevertheless, the CDC offers guidance on how to avoid lightning strikes: avoid water; don’t touch electronic equipment; avoid windows, doors, porches, and concrete; and, don’t use corded phones.⁶⁶ The guidelines go on to extensively document ways to keep yourself safe while boating, being in the mountains, and playing golf. Specific scenarios are discussed, such as being caught out in the open or on water.

60. Contrast this with the guidance offered by the Stodden Report and the Uber Safety Reports. As detailed extensively in my opening report, the Safety Reports minimized the dangers of sexual assault, presenting the material in a way meant to reassure, not inform.⁶⁷ If the Uber marketing team were put in charge of lightning information, presumably the CDC webpage would open with the line “99.9999% of lightning strikes do not hit people!” Whereas the CDC offers detailed information on risk factors and steps to take when caught in storms, Uber concealed information that could have kept riders safe. Uber documentation states that sexual assaults were more likely given certain risk factors such as women traveling alone, riding during late nights or on weekends, pickups near bars or while intoxicated, riding in the front seat, and riding with drivers with previous histories of sexual assault or misconduct.⁶⁸ Rather than fulsomely sharing this information, it was covered up by phrases like this boldface line from the first Safety Report: “The vast majority (99.9%) of Uber

⁶⁴ Rep. Stodden ¶ 31.

⁶⁵ Accounting for underreporting. [REDACTED]

⁶⁶ Center for Disease Control. “Safety Guidelines: Lightning” (Apr. 15, 2015). Accessed Oct. 24, 2025. <https://www.cdc.gov/lightning/safety/index.html>.

⁶⁷ Opening Report § VIII. Statistical Analyses of Uber’s Safety Reports.

⁶⁸ Opening Report § VIII. Statistical Analyses of Uber’s Safety Reports.

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trips end without any safety-related issue at all.” To my knowledge, Uber has never told women that they are at increased risk of being sexually assaulted by their Uber driver if they ride at night, on the weekend, alone, while intoxicated or get picked up near a bar, or in the front seat. Also, to my knowledge, Uber does not share with riders whether their driver has previously had reports of sexual assault or sexual misconduct. Instead, Uber conceals information that would help women understand and take steps to reduce their risk.

VI. Grossly Misleading Presentation of “Results”

61. As described above, the Stodden Report reaches erroneous, statistically invalid conclusions by comparing unlike numbers and failing to follow basic statistical practices. The Report is divorced from the key facts of these matters, such as when and where the Plaintiffs testified that they were attacked. Comparison rates are deemed “relevant,” with no explanation of their relevance other than the potential benefits to the Defendant.

62. These flaws alone invalidate Stodden Report and Dr. Stodden’s opinions expressed therein, but as someone who teaches data-driven communication, it is incumbent upon me to discuss the presentation of results. At nearly every juncture, the Stodden Report seeks to mislead rather than edify.

63. The choice to present these results as ratios, rather than a more conventional measure such as differences, is designed to mislead. These indices allow the Stodden Report to quote massive quantities, such as the first index to appear in emphasized prose: “*118,400 times higher* than the rate of alleged sexual assault on rides on the Uber platform in 2021–22.”⁶⁹ These numbers are presented without sufficient context or explanation.

64. The statistical reference used by the Stodden Report provides guidance on this point, which Dr. Stodden apparently ignores. The title of section III.A is “Are rates or percentages properly interpreted?”⁷⁰ The section opens with a line tailor-made for my criticisms of the Stodden Report’s use of rates: “The selective presentation of numerical information is like quoting someone out of context.”⁷¹ I have a specific recollection of Nate Silver, the founder of 538 and author of *The Signal and the Noise*, in a television interview once making a pithy comment about data communication in an interview. Paraphrasing, he said that if you change a reported number by an order of magnitude and the impact on the reader does not change, then you are not doing a

⁶⁹ Rep. Stodden ¶ 26.

⁷⁰ Kaye & Freedman (2011) § III.A.

⁷¹ Kaye & Freedman (2011) at 230.

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good job contextualizing the number.⁷² The Stodden Report commits this sin repeatedly; it is unclear how the opinions would change if an index for LACMTA of 11,840 was reported, for instance. The numbers reported by Dr. Stodden, and numbers an order of magnitude lower, are equally meaningless.

65. Generally speaking, the Uber SR SA 21-22 rate is used as the comparison, as in the quotation above. This choice is curious, as the surveys were generally carried out in 2024, a year for which Uber data is available. But this choice is not accidental; 2021–22 is the time range which, partially thanks to the COVID-19 pandemic, will cast Uber in the best-possible light, as seen in the following figure.

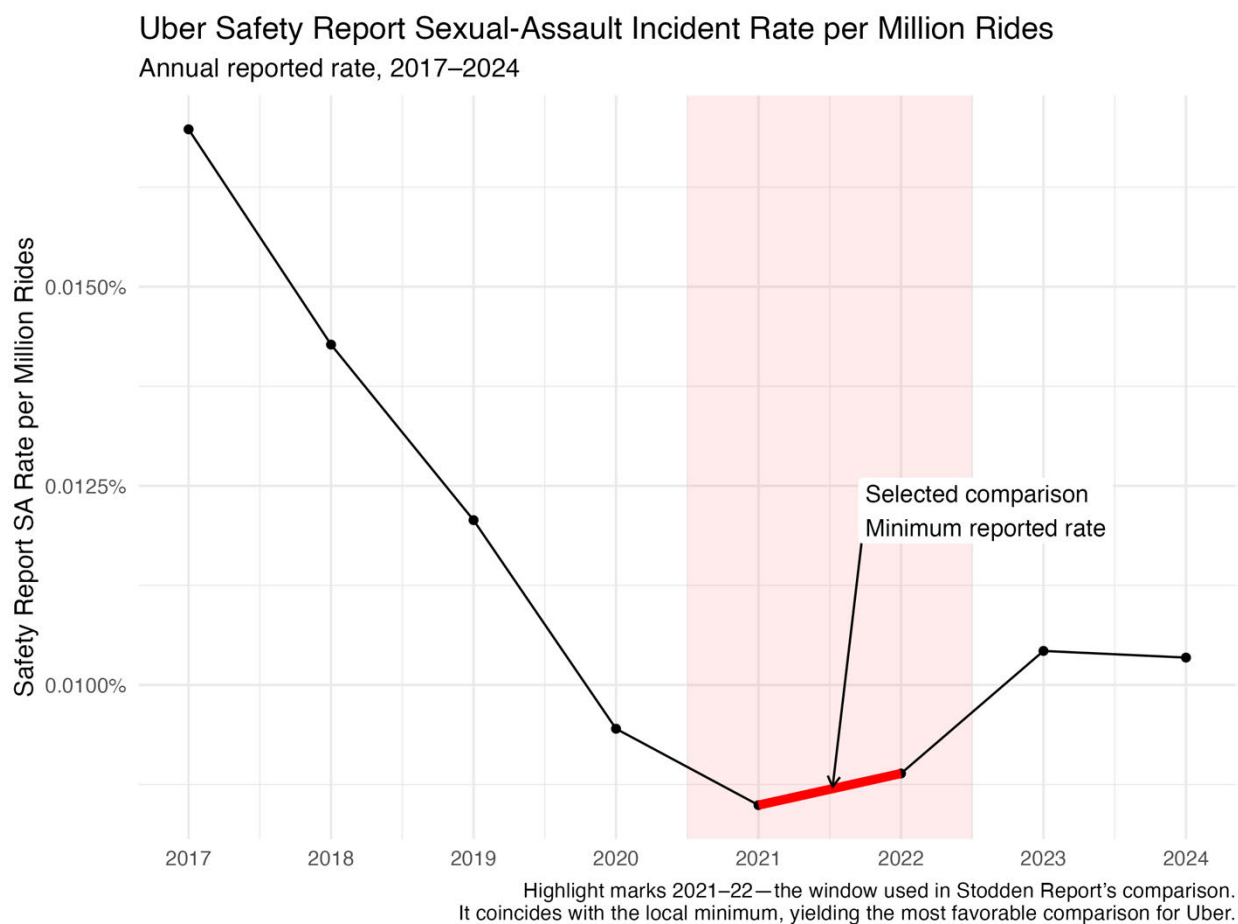


Figure 1. A visual of Uber's selected period of reference.

66. The Stodden Report ignores or downplays available data that undermine its conclusions or highlight the issues in its methods. As described above, Uber's rate of SA is 25% higher than Lyft in the most recent time period reported, a fact skipped over in the Report.

⁷² I cannot find an online reference to this, unfortunately.

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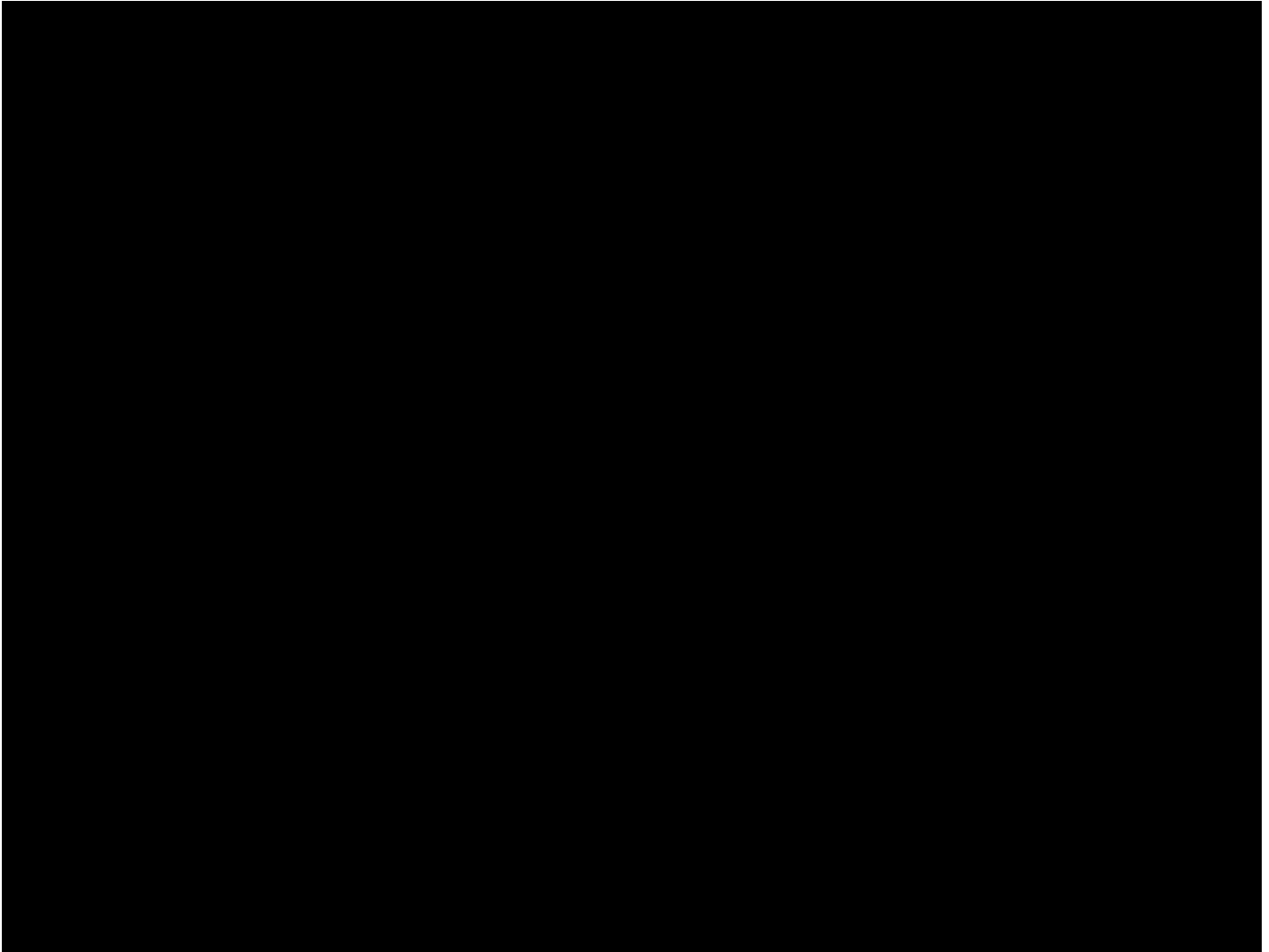
67. The National Crime Victimization Study (“NCVS”) is a carefully designed survey to measure actual rates of sexual assault using reliable methods. It is these data I use to estimate underreporting rates in my Opening Report. Dr. Stodden neglects to use these estimates to contextualize the numbers in her report, perhaps because they would highlight the absurdity of her comparisons. The elevated nature of the California survey response serves the purposes of the Stodden Report and thus these numbers are not scrutinized against reliable sources.

68. Surveys that ask similar questions can be compared with other surveys, whereas these surveys cannot be compared with incidents per ride rates. It is statistically irresponsible, therefore, that the Stodden Report does not mention the directly comparable surveys carried out by Uber, as they shed direct light on Uber’s safety compared to public transportation. Dr. Stodden appeared unaware of the surveys during her deposition.⁷³

69. There are two relevant surveys from 2018 that align methodologically with the Transportation Surveys, except that the latter were carried out roughly five years later, after the passage of California Senate Bill No. 434. The first survey was done by the branding agency Red & Co., with the goal of measuring safety sentiment for riders and drivers. Key features of the survey are discussed in the presentation “Uber Safety Strategy Discussion.”⁷⁴ The analysis of the survey includes several data points that can be directly compared to the Transportation Surveys in the Stodden Report.

⁷³ Stodden Dep. 234:12-16 (“Q: Has Uber ever proactively surveyed its riders to collect information about sexual assault and sexual misconduct rates to your knowledge? A: To my knowledge, I don't know of Uber carrying out such a survey.”).

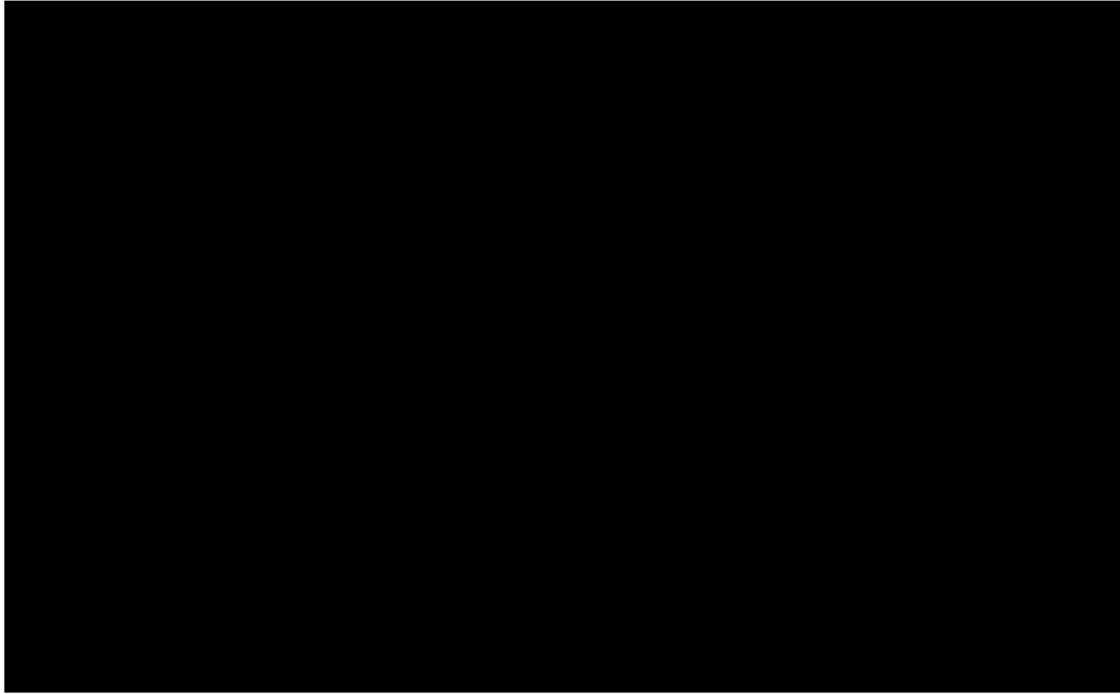
⁷⁴ UBER_JCCP_MDL_000230353 at 75.



70. Based on this analysis, [REDACTED] of respondents reported that a driver made a sexual advance or touched the rider inappropriately. Even more striking is the fraction of drivers and riders who have felt unsafe in the last 30 days⁷⁵:

⁷⁵ UBER_JCCP_MDL_000230353 at 75.

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Figure 2.

71. Most of the Transportation Surveys used by the Stodden Report asked questions directly comparable to these questions.

72. The second survey was executed by the media research firm Kantar.⁷⁶ This survey had 750 rider responses and reported that [REDACTED] riders felt unsafe on Uber.⁷⁷

⁷⁶ UBER_JCCP_MDL_001286065.

⁷⁷ UBER_JCCP_MDL_001286065 at 4, 7, 12.

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73. The first survey says [REDACTED] of respondents report being the victim of sexual misconduct. The rate of SM incidents reported to Uber in 2018, based on data provided by Uber, was approximately [REDACTED]. To echo the language of the Stodden Report, the rate of sexual misconduct found in Uber's survey was [REDACTED] than the rate of sexual misconduct reported to Uber during the year of the survey. These rates are, ostensibly, measuring the same underlying construct. The survey response is two orders of magnitude higher than the rate reported to Uber, illustrating the shortcomings of the methods of the Stodden Report.

74. Turning to the question of "feelings of safety", I have survey results I can directly compare between the Uber surveys and the Transportation Surveys. Uber asked riders if they felt unsafe in the last 30 days. [REDACTED]. The second survey had [REDACTED] disagree with the statement that they felt safe using Uber. To be conservative, I will use the [REDACTED] from this survey.

75. The Transportation Surveys asked very similar questions. For instance, the survey conducted by San Francisco's Muni asked respondents how often they felt safe on Muni, with 12% of respondents stating "never," (a 5 out of 5) and 9% selecting the adjacent option (4 out of 5). The Long Beach Transportation asked respondents, "How safe do you feel using LBT?" 9.2% of respondents selected somewhat or extremely unsafe. At night that total jumped to 46%. For Orange County, 5% of riders reported "rarely" or "never" feeling safe. The Santa Clara Valley Transportation Authority (VTA) found that 12% of riders did not feel safe using VTA. The analogous rates for the other surveys is 19% for San Diego, 18% for BART, and 18% for Alameda Contra Costa. Two surveys, LA DOT and LACMTA, asked separate questions for day and night. LA DOT found rates of perceived unsafety of 8% during the day and 42% at night. LACMTA found 18% during the day and 46% at night.

76. I have plotted these rates of feeling safe with associated uncertainty intervals in the following figure.

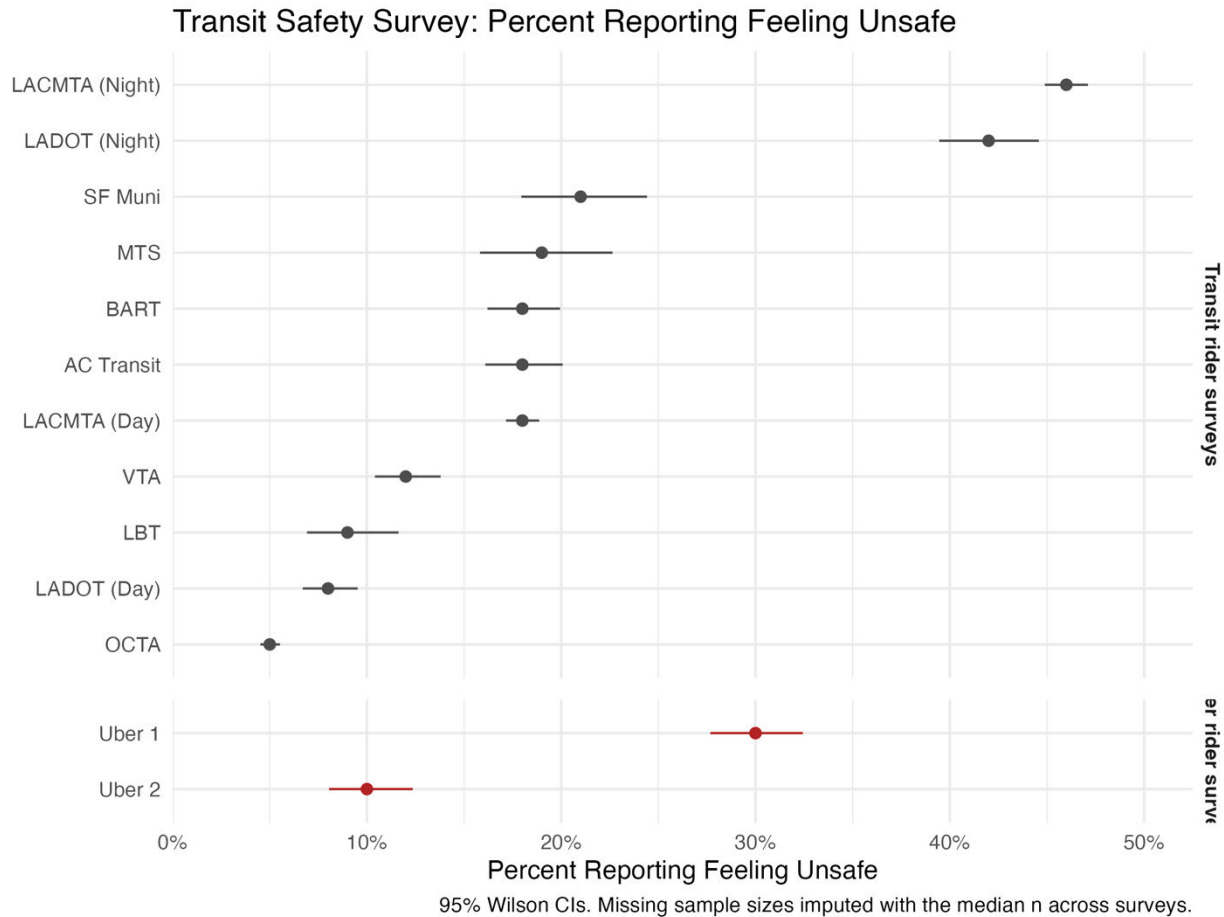
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Figure 5. This chart shows the rates of survey respondents feeling unsafe. The top eleven points indicate these rates in the Transportation Surveys cited in the Stodden Report. The bottom two points are estimates of Uber riders feeling unsafe. 95% confidence intervals measure the uncertainty in the estimate. Uber's rate is comparable to those from the transportation organizations.

77. The first Uber survey indicated that respondents felt more unsafe than any of the municipal surveys, except for the specific “unsafe at night” questions. The second Uber survey shows rates of unsafe feelings higher than OCTA and comparable to several of the municipalities. The results, in short, are mixed, a far cry from the thumb-on-the-scale measurements communicated in the Stodden Reports.

VII. Conclusions

78. The Stodden Report fails to meet the standards of statistical reasoning, factual grounding, and professional communication. Its conclusions are not supported by the data or by any defensible application of statistical methods.

79. First, the Stodden Report's core claims are driven by methodological errors that depart from the most basic principles of inferential statistics. Although the author professes to offer only “descriptive” analysis, the report draws inferential conclusions without uncertainty measures, tests of significance, or consideration of

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the underlying assumptions of comparability. These departures from accepted practice lead to the opposite of what proper analysis would have shown—that Uber rides, particularly for women traveling alone or late at night, pose statistically meaningful risks that are known to the company.

80. Second, the Stodden Report's results do not fit the facts of this matter. The report compares incommensurate quantities—surveys of public-transit riders about experiences or observations of sexual assault with counts of reported Uber incidents per ride. Forty-one of forty-six comparisons in the report fail even basic standards of comparability. Time periods, geographies, and populations are mismatched. The report ignores available data that would allow fair comparisons, including Uber's own rider and driver safety surveys and national victimization data.

81. Third, the Stodden Report misleads through its presentation. The use of large “multiples,” shifting denominators, and rhetorical comparisons to rates like homicides and lightning strikes create the illusion of safety where none is proven. By omitting uncertainty intervals and context, the report amplifies the smallest possible Uber rate and suppresses relevant contrary evidence—an approach inconsistent with objective data communication.

82. Taken together, these errors render the Stodden Report unreliable. The analyses are methodologically unsound, the comparisons invalid, and the conclusions misleading. Proper statistical reasoning, consistent measurement, and transparent presentation would have led to the recognition that Uber's data substantially understate the prevalence of sexual assault and misconduct on its platform.

VIII. Reservation of Rights

83. My opinions and analysis are based upon the information available to me to date. I may review and consider additional information that may be produced by the parties to this dispute. I intend to supplement my opinions, if it is appropriate to do so. I also reserve the ability to provide rebuttal opinions and testimony in this matter, to create demonstratives for use at trial based upon the information contained in this report, appendices, and exhibits, and generally to utilize other graphical depictions as aids in the presentation of my findings.

APPENDIX A

MATERIALS CONSIDERED

All documents and sources referred to and cited in Dr. Chandler's Opening and Rebuttal reports and their footnotes, including Bates-stamped documents, deposition transcripts, and other sources.

Discovery Responses and Expert Reports

All available discovery responses produced within *In re: Uber Technologies, Inc., Passenger Sexual Assault Litigation*, MDLCase No. 3084 (N.D.Cal.), including:

1. The Parties' discovery responses and objections to Interrogatories, Requests for Admission, and Requests for Production;
2. Incident Report Classification of Dominant Tickets for 2017-2024;
3. Supp. Info Provided by Defs. Pursuant to the Parties' Agreement (4/4/2025);
4. Incident Report Classification for 2023-2024;
5. Declaration of Sunny Wong (9/24/25); and,
6. Expert Report of Victoria Stodden, PH. D. (9/26/25).

Deposition Transcripts & Exhibits

Deposition transcripts and exhibits within the matter of *In re: Uber Technologies, Inc., Passenger Sexual Assault Litigation*, MDL No. 3084 (N.D.Cal.) and *In re Uber Rideshare Cases*, Case No. CJC-21- 005188 (Cal. Super. Ct.), including:

1. Michael Akamine Deposition and Exhibits (5/19/25 and 5/20/25)
2. Brooke Anderson Deposition and Exhibits (05/01/25 and 05/02/25 and 5/6/25)
3. William Anderson Deposition and Exhibits (9/26/23)
4. Matthew Baker Deposition and Exhibits (11/13/24)
5. PMK (Emilie Boman) Deposition and Exhibits (3/5/25 and 4/1/25)
6. Tracy Breeden Deposition and Exhibits (3/13/25 and 3/14/25)
7. 30(b)(6) (Gregory Brown) Deposition and Exhibits (6/17/25)
8. 30(b)(6) (Gregory Brown) Deposition and Exhibits (7/15-16/2025 and 8/25-26/2025)
9. PMK (Gregory Brown) Deposition and Exhibits (3/13/25 and 3/14/25 and 5/7/25)
10. 30(b)(6) (Jamie Brown) Deposition and Exhibits (August 6, 2025)

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- 11. Jordan Burke Deposition and Exhibits (3/20/25 and 3/21/25)**
- 12. Faiz Bushra Deposition and Exhibits (5/13/25)**
- 13. Philip Cardenas Deposition and Exhibits (2/26/25)**
- 14. Frank Chang Deposition and Exhibits (5/9/25)**
- 15. 30(b)(6) (Heather Childs) Deposition and Exhibits (6/5/25)**
- 16. Dennis Cinelli Deposition and Exhibits (3/28/25)**
- 17. 30(b)(6) (Chad Dobbs) Deposition and Exhibits (8/21/25)**
- 18. 30(b)(6) (Mariana Esteves) Deposition and Exhibits (7/15/25 and 8/28/25)**
- 19. Chadd Fogg Deposition and Exhibits (2/5/25)**
- 20. Cory Freivogel Deposition and Exhibits (12/10/24 and 2/6/25)**
- 21. Henry (Gus) Fuldner Deposition and Exhibits (3/26/25 and 3/27/25 and 4/29/25)**
- 22. 30(b)(6) (Todd Gaddis) Deposition and Exhibits (7/11/25)**
- 23. PMK (Todd Gaddis) Deposition and Exhibits (7/8/25 and 7/9/25 and 7/11/25)**
- 24. Catherine Gibbons Deposition and Exhibits (6/5/25)**
- 25. Ryan Graves Deposition and Exhibits (5/13/25)**
- 26. Andrew Hasbun Deposition and Exhibits (4/10/25 and 4/11/25)**
- 27. Cassandra Hawk Deposition and Exhibits (4/8/25)**
- 28. Jill Hazelbaker Deposition and Exhibits (6/17/25)**
- 29. Rachel Holt Deposition and Exhibits (12/12/24 and 4/9/25)**
- 30. Jordan Hornback Deposition and Exhibits (3/31/25)**
- 31. Nairi Hourdajain Deposition and Exhibits (2/7/25)**
- 32. Meghan Joyce Deposition and Exhibits (2/26/25)**
- 33. Roger Kaiser Deposition and Exhibits (11/19/24 and 4/22/25)**
- 34. Travis Kalanick Deposition and Exhibits (7/3/25)**
- 35. Sachin Kansal Deposition and Exhibits (5/28/25)**
- 36. Dara Khosrowshahi Deposition and Exhibits (7/1/25)**
- 37. Carly Lake Deposition and Exhibits (3/20/25 and 3/21/25)**

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- 38. Jenny Luu Deposition and Exhibits (2/27/25)**
- 39. 30(b)(6) (Katherine McDonald) Deposition and Exhibits (4/25/25)**
- 40. Katherine McDonald Deposition and Exhibits (10/7/24 and 5/7/25)**
- 41. 30(b)(6) (Hannah Nilles) Deposition and Exhibits (6/30/25)**
- 42. 30(b)(6) (Hannah Nilles) Deposition and Exhibits (7/10/25)**
- 43. 30(b)(6) (Hannah Nilles) Deposition and Exhibits (7/23/25 and 8/7/25)**
- 44. PMK (Hannah Nilles) Deposition and Exhibits (5/5/25 and 5/14/25 and 5/29/25)**
- 45. 30(b)(6) (Hannah Nilles) Deposition and Exhibits (August 7, 2025)**
- 46. Jodi Page Deposition and Exhibits (5/21/25)**
- 47. Katherine Parker Deposition and Exhibits (12/3/24 and 2/14/25)**
- 48. PMK (Rebecca Payne) Deposition and Exhibits (4/2/25 and 4/3/25 and 5/2/25 and 5/12/25 and 5/13/25)**
- 49. Andi Pimentel Deposition and Exhibits (10/15/24 and 3/27/25)**
- 50. Cameron Poetzsch Deposition and Exhibits (6/4/25)**
- 51. David Richter Deposition and Exhibits (2/24/25)**
- 52. Brad Rosenthal Deposition and Exhibits (10/24/23)**
- 53. 30(b)(6) (Elizabeth Ross) Deposition and Exhibits (6/11/25 and 6/12/25)**
- 54. Danielle Sheridan Deposition and Exhibits (5/15/25 and 5/16/25)**
- 55. Valerie Shuping Deposition and Exhibits (4/17/25 and 4/18/25)**
- 56. Nicholas Silver Deposition and Exhibits (11/21/24)**
- 57. Troy Stevenson Deposition and Exhibits (10/21/24)**
- 58. Joseph Sullivan Deposition and Exhibits (6/25/25)**
- 59. Michael Sullivan Deposition and Exhibits (3/26/25)**
- 60. Pat Twomey Deposition and Exhibits (5/29/25)**
- 61. Kayla Whaling Deposition and Exhibits (2/28/25 and 4/22/25)**
- 62. 30(b)(6) (Sunny Wong) Deposition and Exhibits (6/25/25)**
- 63. PMK (Sunny Wong) Deposition and Exhibits (4/16/25)**

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64. 30(b)(6) (Sunny Wong) Deposition and Exhibits (7/23/25)

65. Victoria Stodden Deposition and Exhibits (10/21/25)

66. Defendants' Uber Technologies, Inc., Rasier LLC, and Rasier-CA, LLC's Responses to Topics 3-15 of All Plaintiffs' Notice of 30(b)(6) Deposition of Uber Technologies, Inc., Rasier LLC, and Rasier-CA, LLC (Recordkeeping) with Exhibits (7/2/25)

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Bates Stamped Productions, including:

1. UBER_JCCP_MDL_000149063
2. UBER_JCCP_MDL_000157026
3. UBER_JCCP_MDL_000157756
4. UBER_JCCP_MDL_000178095
5. UBER_JCCP_MDL_000190756
6. UBER_JCCP_MDL_000192643
7. UBER_JCCP_MDL_000194589
8. UBER_JCCP_MDL_000208167
9. UBER_JCCP_MDL_000212868
10. UBER_JCCP_MDL_000230347
11. UBER_JCCP_MDL_000230353
12. UBER_JCCP_MDL_000250291
13. UBER_JCCP_MDL_000250635
14. UBER_JCCP_MDL_000250691
15. UBER_JCCP_MDL_000253977
16. UBER_JCCP_MDL_000258239
17. UBER_JCCP_MDL_000260133
18. UBER_JCCP_MDL_000303417
19. UBER_JCCP_MDL_000326520
20. UBER_JCCP_MDL_000420202
21. UBER_JCCP_MDL_000479545
22. UBER_JCCP_MDL_000482048
23. UBER_JCCP_MDL_000485724
24. UBER_JCCP_MDL_000500944
25. UBER_JCCP_MDL_000505173
26. UBER_JCCP_MDL_000510521
27. UBER_JCCP_MDL_000519117
28. UBER_JCCP_MDL_000534753
29. UBER_JCCP_MDL_001113654
30. UBER_JCCP_MDL_001257529
31. UBER_JCCP_MDL_001286065
32. UBER_JCCP_MDL_001406648
33. UBER_JCCP_MDL_001423010
34. UBER_JCCP_MDL_001481664
35. UBER_JCCP_MDL_001532091
36. UBER_JCCP_MDL_001533288
37. UBER_JCCP_MDL_001543329
38. UBER_JCCP_MDL_001584753
39. UBER_JCCP_MDL_001616763
40. UBER_JCCP_MDL_001617507

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41. UBER_JCCP_MDL_001617918
42. UBER_JCCP_MDL_001638758
43. UBER_JCCP_MDL_001715523
44. UBER_JCCP_MDL_001719965
45. UBER_JCCP_MDL_001720191
46. UBER_JCCP_MDL_001720345
47. UBER_JCCP_MDL_001721232
48. UBER_JCCP_MDL_001727867
49. UBER_JCCP_MDL_001730335
50. UBER_JCCP_MDL_001730937
51. UBER_JCCP_MDL_001731737
52. UBER_JCCP_MDL_001733032
53. UBER_JCCP_MDL_001738115
54. UBER_JCCP_MDL_001739607
55. UBER_JCCP_MDL_001739609
56. UBER_JCCP_MDL_001739642
57. UBER_JCCP_MDL_001739644
58. UBER_JCCP_MDL_001739646
59. UBER_JCCP_MDL_001740002
60. UBER_JCCP_MDL_001740028
61. UBER_JCCP_MDL_001740053
62. UBER_JCCP_MDL_001740077
63. UBER_JCCP_MDL_001740100
64. UBER_JCCP_MDL_001740123
65. UBER_JCCP_MDL_001742213
66. UBER_JCCP_MDL_001742216
67. UBER_JCCP_MDL_001742218
68. UBER_JCCP_MDL_001742219
69. UBER_JCCP_MDL_001742220
70. UBER_JCCP_MDL_001742222
71. UBER_JCCP_MDL_001742223
72. UBER_JCCP_MDL_001778214
73. UBER_JCCP_MDL_001870480
74. UBER_JCCP_MDL_002061960
75. UBER_JCCP_MDL_002063229
76. UBER_JCCP_MDL_002069185
77. UBER_JCCP_MDL_002069369
78. UBER_JCCP_MDL_002079300
79. UBER_JCCP_MDL_002079301
80. UBER_JCCP_MDL_002079301
81. UBER_JCCP_MDL_002264918

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82. UBER_JCCP_MDL_002305839
83. UBER_JCCP_MDL_002311861
84. UBER_JCCP_MDL_002327552
85. UBER_JCCP_MDL_002340763
86. UBER_JCCP_MDL_002527017
87. UBER_JCCP_MDL_002531877
88. UBER_JCCP_MDL_002658347
89. UBER_JCCP_MDL_002705658
90. UBER_JCCP_MDL_002705668
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97. UBER_JCCP_MDL_002709843
98. UBER_JCCP_MDL_002713560
99. UBER_JCCP_MDL_003211940
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116. UBER_JCCP_MDL_004977435
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123. UBER_JCCP_MDL_005764222
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124. UBER-MDL3084-000046507
125. UBER-MDL3084-000067465
126. UBER-MDL3084-000159988
127. UBER-MDL3084-000304899
128. UBER-MDL3084-000312229
129. UBER-MDL3084-BW-00000001
130. UBER-MDL3084-BW-00000002
131. UBER-MDL3084-BW-00000003
132. UBER-MDL3084-BW-00000004
133. UBER-MDL3084-BW-00000005
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144. UBER-MDL3084-BW-00000016
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155. UBER-MDL3084-BW-00000027
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158. UBER-MDL3084-BW-00000030
159. UBER-MDL3084-BW-00000031
160. UBER-MDL3084-BW-00000032
161. UBER-MDL3084-BW-00000033

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- 162. UBER-MDL3084-BW-00000034**
- 163. UBER-MDL3084-BW-00000035**
- 164. UBER-MDL3084-BW-00000036**
- 165. UBER-MDL3084-BW-00000037**
- 166. UBER-MDL3084-BW-00000038**
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13. Broniarczyk, S. M., & Alba, J. W. (1994). "The Importance of the Brand in Brand Extension." *Journal of Marketing Research*, vol. 31, no. 2, pgs. 214-228.
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